

Survey – A discussion of relevant issues from a Geophysical Technologist perspective.

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Introduction

Survey information is a small but integral part of the Exploration process. This paper will examine common survey and coordinate issues encountered by geophysical technical staff in dealing with geophysical data, well locations, workstations, databases and GIS applications. It will review some of the theory behind the issues and discuss how these tie into a typical geophysical technologist's responsibilities.

Theory

The word 'Datum' is a loosely used term in the Geophysical Industry. The definition of a datum in The Random House Webster's Dictionary is: a single piece of information, as a fact, statistic, or code; an item of data. The fact in our industry is that from a survey perspective, we need to be aware that your geophysical surveys can and are referenced to different Datum's (ATS, STS, NAD) which ultimately effect the location of you seismic line and therefore your well locations. We will examine the common types of Datum's technical geophysical staff is exposed to and what the impact is if there is a lack of understanding and/or interpretation.

Similar to Datum's, Western Canada and rest of the World has many coordinate systems that your data can be presented in. The most common of these Coordinates Systems for CSEG members are UTM, Geographic and in Western Canada, Local and Boundary Coordinates. This section of the discussion will provide a basic understanding of the different systems.

Common Issues

The second half of this talk will discuss common issues encountered by technologists in the geophysical industry. How do we now apply our new knowledge of survey systems to everyday geophysical technologist tasks? Where do we encounter these issues? How are these coordinates collected in the first place? What should a complete survey package look like? And how is my data being quality inspected to ensure consistency and integrity? These are all real questions being asked by new and seasoned veterans of the geophysical technologist community.

Summary

The ideal candidate for this talk is not only people new to the geophysical industry, but also includes people who have been in the industry for a number of years who have dealt with the issues and come up with solutions. The intent of this talk is to bring light to the importance of survey, generate thought and discussion and to aid geophysical technologists to perform their daily activities with greater a greater understanding of survey related issues.